Description

Key protection for mobile radio devices

The invention relates to a method for protecting a mobile radio device against unintended switching on, a method for protecting a mobile radio device against unintended cancellation of a lock function and a method for protecting a mobile radio device against unintended activation of a function key.

Mobile radio devices or mobile telephones are becoming smaller and smaller and can now easily be carried in a trouser pocket. To protect them against unintended switching on, mobile radio devices are generally protected by a fold down cover over the keypad or a hard case. This protection influences the design of the device.

Mobile radio devices are generally switched on by what is known as a long press or pressing the on/off key for a predefined period. Without additional mechanical protection, mobile telephones that are switched off can be inadvertently switched on whilst being carried in a trouser pocket and chargeable calls or internet access can even be initiated.

The object of the invention is to improve the protection of a mobile radio device against unintended switching on and to protect it against unintended cancellation of a lock function.

This object is achieved according to the invention for a method for protecting a mobile radio device against unintended switching on by the features specified in claim 1, for a method for protecting a mobile radio device against unintended

cancellation of a lock function by the features specified in claim 2 and for a method for protecting a mobile radio device against unintended activation of a function key by the features specified in claim 3.

The claimed protection of mobile radio devices is based on a purely electronic solution, so that there are no constraints on the design of the telephone.

The claimed solution is based on the assumption that a mobile telephone carried in a trouser pocket is not switched on by a clean long press with uncontrolled key activation but that the pressure exerted by the trouser pocket is distributed more or less regularly over a number of keys.

Therefore with the claimed method the pressure applied to a key with or shortly after the long press is stored and evaluated for example during or after start-up. If other keys have been pressed at the same time or almost at the same time as the long press on the on/off key, or a number of keys were pressed at the same time just after this, it is assumed that this is unintended and the device is switched off again. The mobile radio device is therefore only switched to operating mode, if a pressure is applied for a predefined period to the on/off key and no further keys have been pressed during this time period.

It is also possible for example to protect a locked keypad in the same manner. The key press to cancel the lock function on a predefined lock key is monitored in the same manner, so that unintended cancellation of the key lock is prevented.

The same method can also be used to protect soft keys and speed call keys. Thus when a device is switched on, if the user has for example forgotten to lock the keypad, it is therefore possible to prevent unintended internet access and calls from the telephone book or using speed dial. Such protection can be offered to the user as a permanent active option. It is then still possible to switch off the mobile radio device but it is not possible to forget to activate key lock.

In one embodiment of the invention such protection is offered to the user as an option, for example via the menu.